

# PCD grade: CTB004

## Precision machining and finishing

### Physical and metallurgical properties

Property	Measurement	Applicable standard
Transverse rupture strength characteristic strength (MPa)	1921	ASTM C 1239
Weibull modulus	6.35	
Fracture toughness mean (MPa.m <sup>1/2</sup> )	9.15	Shetty et al. (1995)
Elastic modulus (GPa)	9.50	ASTM E494
Poisson's ratio	0.1	
Density (g/cm <sup>3</sup> )	4.19	Archimedes principle
Thermal conductivity (W/m/K) at 500°C	248.1	Calculated from thermal diffusivity, specific heat capacity and density
Knoop hardness (Indentation)(GPa)	47	ASTM C1326-03

Diamond grain size (µm)

~4

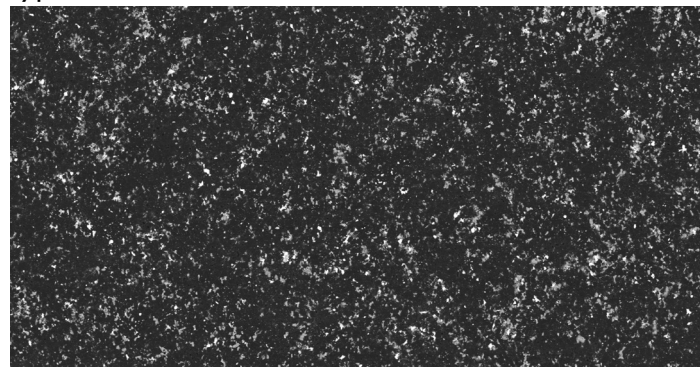
Cobalt ratio (wt%)

~10%

All property measurements are carried out, where possible, in accordance with relevant international standards. The data quoted is for comparative purposes only and should not be viewed as a product specification.

Element Six is constantly striving to improve its products and, therefore, reserves the right to alter product properties without prior notice.

### Typical microstructure



BEC 20kV SS50 X500 Magnification 50µm

### Contact us

T 135-152-5109  
E [david@winkingtec.com](mailto:david@winkingtec.com)  
W [www.winkingtec.com](http://www.winkingtec.com)



This product has been manufactured under the controls established by a Bureau Veritas Certification approved management system.

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